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How novice dairy consultants help farmers design improved farming systems.

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Abstract

Developing a new farm consultant from the start of their career through to an expert takes considerable time, money and resources. To make the process more efficient DairyNZ has developed a training program for new consultants that includes formal training and the whole farm assessment process. The development of new farm consultants could also be assisted by understanding the knowledge and skills held by expert and novice consultants. The knowledge and skills held by an expert consultant is reported by Gray, Kemp, Reid, and Westbrooke (2014), this study reports the findings for a novice consultant.

The objective of both this and the study of the expert or experienced consultant was to investigate the problem solving processes they used in farm management consultancy. A single case-study approach was used, where the novice consultant (NC) was interviewed three times, using a semi-structured protocol. The data was analysed using a qualitative data analysis technique. Once analysed the results were compared to both the literature and the experienced consultant (EC) reported by Gray et al. (2014).

The NC reported that good interpersonal skills are important in the consultancy process. The NC built positive social capital, or a positive reputation within the consultancy firm for whom he worked and with farmers and agribusiness professionals. This positive social capital was critical for the NC to build a client base. The NC, like the EC preferred to undertake the role of coach or facilitator during a consultancy visit, however he could undertake other roles as necessary. The NC emphasised the importance of build rapport with a farmer, both to retain them as a client, and to gain information, often sensitive, important for problem identification and solution. The NC utilised a range of different approaches to build rapport with a client. The level of rapport that the NC has built with the client will influence the follow-up of the plan and future visits with the client.

With regards to the physical consultancy process, the NC uses the initial phone contact with the farmer to indicate the general issue to be discussed on farm. Unless the issue is financial, he does minimal pre-visit preparation. The NC prefers to start the farm inspection as soon as possible in the visit, as this is where he finds clients are most comfortable.

Like the EC, the NC gained information during the visit via observation, questioning and reading documents. Validation of this information and looking for issues 'not mentioned' was considered critical for the consultant to build a correct picture of the farming situation. In agreement with the literature and the EC, the NC also used benchmarking, classification and comparison although some of these processes were intuitive and subconscious and thus difficult for the NC to articulate. In contrast, the EC had greater self-awareness of the processes he used. The focus of a farmer's conversation, their ability to provide data and information along with benchmarking assisted the NC to identify problem areas.

There was also an emphasis on separating different levels of on farm issues, the symptoms from the underlying causes, and issues noted initially by the farmer compared to the 'real' issue that they wanted to address.

Scenario analysis, 'working back from an end point' and 'drilling down to an issue' were used to both identify the problem and develop solutions. The NC included the farmer in solution development to include their, the problem owners, key knowledge of the issue and business. Follow-up, reports and future visits, were based on the farmers situation and preferences. The NC stated that there has been an increased desire amongst farmers for written farm reports.

In terms of training farm consultants, prospective consultants need to be enthusiastic and able to make clients feel optimistic and have good interpersonal skills. An understanding of soft skills, such as rapport building and decision making processes could also assist prospective farm consultants.

In agreement with the literature, building contextual knowledge of the area in which they wish to become an expert is critical. This comprises developing knowledge of a range of farming systems in a range of environments and in a range of situations. It was suggested that this could continue post-University prior to starting as a farm consultant. The knowledge and skills needed to become a successful farm consultant can be built by observation, practice and evaluation, as also suggested in the literature. This could be done in a gradual way, starting with small and relatively simple work and moving to working with more complex issues and systems. In this way it allows the new farm consultant to build the all-important positive reputation within a consultancy firm, with agribusiness professionals and farmers. This reputation is critical for the new consultant in terms of developing a client base.

1. Background

DairyNZ have developed a training programme to improve the capability of novice consultants which is being tested across seven consultancy firms. One source of knowledge that would be useful for this training programme, is the knowledge held by experienced farm management consultants. New Zealand has a pool of very experienced farm management consultants. If this pool of expertise could be captured, it could then be passed on to novice farm management consultants to greatly enhance their capability. However, little research has been undertaken on the practices of New Zealand farm management consultants to date. In 2014, a pilot study was initiated to investigate how an "expert" dairy consultant helped a new client design an improved farming system. The pilot study obtained an overview of the problem solving process used by the expert consultant to help design an improved farming system for a new client. This study seeks to describe the consultancy process used by a novice farm consultant. These processes will then be compared with those undertaken by an experienced consultant to highlight important differences and provide an understanding of the consultancy process at key stages in a farm management consultant's career. This research will be used to help extend the DairyNZ training programme for novice consultants. The study aimed to answer the following questions:

Research questions

1. How does a novice consultant develop their skills and knowledge of farm consultancy and build their client base.
2. How does a novice consultant help dairy farmer clients to design improved farming systems.
3. How does the process the NC uses differ from that of the expert consultant?

2. Method

As with the companion report by Gray et al. (2014) , the objective of this study was to investigate the problem solving process used by a farm management consultant. The same approach, a single case-study (O'Leary, 2005) was used for both studies. The consultants, both novice and experienced, were selected on the following criteria: being a specialist dairy consultant, a specified level of experience in consultancy, provided general farm management advice and was willing to participate in the study. The novice consultant (NC) also works with non-dairy farmers, however, a major proportion of the consultant's work was with dairy farmers. The NC provided advice in the areas of: production systems, financial

management, irrigation and employment and was hence providing general farm management advice. The consultant was a novice at the time of the interviews with three to four years of experience and willing to participate in the study.

A semi-structured interview protocol (O'Leary, 2005; Ritchie & Lewis, 2003) was designed based on the literature review reported in the companion study (Gray et al., 2014). The protocol was used to interview both the novice and the experienced consultant. Three interviews, each lasting approximately one hour were conducted with the NC. The first interview focused on the training the NC received, how a client base was built and a brief overview of the consultancy process. The second and third interviews focused in more detail on the consultancy and problem solving processes used by the NC. Each interview was taped and transcribed. The data from the NC was analysed using a qualitative data analysis technique similar to that recommended by Dey (1993). A draft of the report was sent to the NC to verify that the information it contained was correct. The case report was then compared and contrasted with the findings reported in the literature and the case report on the expert consultant (EC) as reported by Gray et al. (2014).

3. Literature review

A comprehensive and detailed review of the literature in relation to improving farm management consultancy process in New Zealand is provided in the report by Gray et al. (2014). The intention in the following section is to provide an indication of what is covered in the literature review by Gray et al. (2014), rather than repeating the information. An additional discussion of the differences between experts and novices is provided at the end of this section.

- Consultancy process,
    - Describes the consultancy process which consists of a physical consultancy process and a problem solving framework.
- The problem solving framework,
    - Describes the importance of rapport, then each of the eight steps in the problem solving framework.
- Knowledge cultures: Consultants as 'boundary spanners',
    - Describes how knowledge from one culture, for example non-farming or scientific, requires interpretation for another knowledge culture for example farming. Uses the example of agri-environmental schemes.
- Improving farm management consultancy in New Zealand,
    - Describes the work of Kenny and Nettle (2011); (Kenny & Nettle, 2012, 2013) on areas farm consultants believed were important to train new consultants in and also the development of a gap analysis tool to assist new consultants to become competent more quickly.

- Decision making,
    - Discusses naturalistic decision making, or decision making in everyday situations, relevant to farm management.
- Expertise,
    - Discusses that expertise is built in a specific area or domain.
    - Discusses processes used in problem solving such as metacognition or thinking about thinking, in a consultancy context this would be the farm consultants ability to reflect and monitor their work. Also processes to work with and make sense of the large amount of data gathered, communication skills, the importance of rapport building, and thinking skills such as perception, memory and logical thinking.
    - Discusses training required to move through the stages of novice to advanced beginner to competent, proficient and then expert using examples from medicine and the military.

3.1. Differences between experts and novices

In a review of the literature on expert novice differences, Pachman (2012) mentions the following differences:

- Experts are superior in knowledge, excelling only in their own domain (Chi, Glaser, & Farr, 1988).
- Experts spend more time analysing the problem (Chi et al., 1988).
- Experts are better monitors of their performance (Chi et al., 1988).

Sternberg (1997) notes that much of the research on expertise focuses on what he terms an experts' quantity-of-knowledge and organization-of-knowledge, but omits other important considerations. These he details as: superior analytical ability in solving problems; superior creative ability; superior automization and superior practical ability.

Orasanu and Connolly (1993) point out the contradiction between the findings of various researchers into decision making. Researchers found that expertise was of little use in domains such as the judgement of clinical psychologists or economic forecasters. On the other hand significant differences were found in some domains between experts and novices with respect to the interpretation of problems, the strategies selected for problem solving and the information utilised as well as the speed and accuracy of problem solving. The crucial distinction between the results relates to the domain. As Orasanu and Connolly (1993) observe, expertise confers an advantage when the problem solving task has to be structured, ambiguous cues need to be interpreted and there is a reliance on underlying causal models but not when a significant amount of computation is required. Klein (2009) believes that expertise is the confluence of decision making, "sense making" of events and adaptable behaviour (2009, p.7). It is the experts' understanding of

the problem domain which enables them to diagnose problems and make predictions.

Lippett and Lippett (1986) note that the quality of decision making in these circumstances is highly dependent upon the conceptual framework used to organise a consultation. Consultants may have to play one or more roles (Kubr, 2002; Margerison, 1988). Those described by Kubr (2002) include: reflector, process specialist, fact finder, alternative identifier, collaborator, trainer, technician, expert and advocate. Consequently, many skills are required to function successfully as a consultant.

Margerison (1988) characterises the type of situation that is faced by farm management consultants as being of the problem solving kind (as opposed to solution centred). Since the problem is open-ended, the client has to understand the process by which the solution is reached, and is directly involved in managing the developing situation. Problems may occur with relation to data collection since in advisory situations people are not always prepared to supply the information required. Even if information is available it may only be provided if the right questions are asked and if the consultant is trusted and can follow up key cues and clues. Lippett and Lippett (1986) stresses the importance of the timely communication of ideas to the client. They observe that even the best solutions can be ignored if introduced at the wrong time. Persuasiveness and tact are called for. The solution depends for its success on the client's acceptance of details. When experts advise clients, Shanteau (2001) suggests that they will not necessarily agree about the nature of a problem and its solution. The experts are working in dynamic situations; their role is "to make sense out of chaos" and enable clients to make the final decision.

The role of metacognition, thinking about thinking (Flavell, 1979), is very important to ensure that practitioners can monitor their own activities and reflect upon them. It essentially allows them to exert control over what is occurring (Winne & Nesbit, 2010) and adapt their work practices as necessary (Klein, 2009).

The farm management consultants may conduct a mental post mortem after the visit, identifying their own strengths and weaknesses. Writing up a report or letter to the client also offers opportunities for reflection. Reflection supports a vital activity, self-assessment which can lead to self-regulated learning (Kriewaldt, 2001). This requires people to set standards for their own performance (Winne & Nesbit, 2010).

The farm management consultants, working in an information rich and knowledge intensive environment, appear to have a great deal of tacit knowledge stored in long term memory and the ability to process it unconsciously. Betsch (2008) comments on the symbiotic nature of the relationship between memory and unconscious processing stating that "Consolidation (for example via frequent repetition) enhances the likelihood that automatic processes come into play."

Betsch (2008) also claims that "intuition is almost unconstrained by capacity limit." The experiential system makes minimal processing demands on the brain because of what is described as long-term working memory (Ericsson & Kintsch, 1995). The brain's ability to process information in parallel allows fast decisions to be made based on the totality of someone's prior experiences and not just on a subset (Betsch, 2008).

The expertise of the farm management consultants appears to be related not only to intuitive judgments but also considered, reflective, decision making (Evans, 2008). Their metacognitive and analytic skills enable them to retain control of the problem solving process whilst being able to quickly recognize important features of the situation. The reflective System 2 reasoning involved, according to Evans (2008), is supported by working memory which incorporates short term memory plus executive and inhibitory functions, enabling thinking to be under intentional control (Evans, 2008).

The System 1 and System 2 thinking exhibited by the farm management consultants can both be associated with heuristic processing (Epstein, 2008; Evans, 2008) It is well-known that people regularly use heuristics or rules of thumb when making decisions (for example, protect your queen when playing chess). The heuristics associated with System 1, automatic thinking, are based on intuition as defined above. Experience allows assessments about the state of the farm or the skills of the farmer to be made automatically. Farm management consultants can also develop their own heuristics based on experience such as identifying the critical indicators when they analyse the financial situation of a farmer. Heuristics can then be used consciously as a short cut (Epstein, 2008). Interventions occur when people think critically or reflectively as occurs with the farm management consultants.

Gigerenzer and Gaissmaier (2011) have written at length about the conscious use of heuristics. They note that using heuristics consciously can achieve more accurate results than more complex strategies using more data, as long as they accurately reflect features of the environment (ecological rationality). They refer to this as the less-is-more effect. For classification and diagnosis using heuristic processing or the use of what is termed a fast and frugal diagnostic tree can be used where cues are searched in a pre-determined order and the search is stopped when a result is obtained.

4. Results and discussion

4.1. Introduction

This section presents the findings from the study in terms of the consultancy and problem solving processes used by the novice consultant and compares these to

that of the expert consultant investigated by Gray et al. (2014) and the literature. The first section describes the key characteristics of the novice consultant to provide background for interpreting the results of this case study. The report then describes the physical consultancy process and then the problem solving framework. Based on the consultancy process used by the novice consultant, implications for training consultants are discussed, and a comparison of the processes used by the novice and experienced consultant is undertaken. The report finishes with some concluding comments.

4.2. Case description

The NC was not brought up on a farm, and on leaving school he completed an agricultural degree majoring in farm management. Throughout his degree he worked on a range of farming systems during his summer vacations. Upon graduation, he obtained a position with a farm management consultancy firm. The firm is relatively small with less than 15 consultants and as such has not developed a formal training process for new staff members. The training that the NC undertook is described in section 4.6. At the time of selection, the NC had worked for four years in consultancy.

The NC's own work mix has changed over time. In 2014, 40% of his work was with projects, such as land purchase appraisals; in 2015 this had reduced to 20% of his work, with no project work in 2016. The NC prefers to work with farmers where he can see that his work has added value to their farm business. He does run farm discussion groups, however he is not looking to expand this area of his work. It took five years for the NC to build his reputation with farmers and to build his client base to 40-50 farmers. Interaction with these clients ranges from weekly thought to annual visits.

The NC prefers to work with intensive, progressive clients, who are willing to change. If he is working with a client whom he believes is not meeting these criteria he normally tells them that he does not think he is adding value to their business and it is up to them if they want to retain his services. Following this discussion some farmers will still "*keep him on*" and he will continue to work with them. The NC works with farmers over a wide geographic area and a proportion of his clients are not dairy farmers.

The NC's areas of strength or "*bread and butter*" are production systems, financial analysis, and employment issues. For production systems, his work is mainly in relation to feed budgeting and improving stock performance. In terms of financial analysis, his focus is on improving profitability. The NC noted that he is comfortable dealing with *"farm related production system stuff"*. He admits that his soft skills are not suitable for some of the more sensitive work, for example family issues such as succession. For these more sensitive issues and other issues outside his area of expertise, the NC will involve other rural professionals. The NC

stated that part of the 'art' of consultancy is bringing other rural professionals into the problem situation, and also assessing if other rural professionals are required and who. The NC stated that his clients are fairly open to bringing in another rural professional if he suggests they may be of value. The NC will be involved in meetings between his client and the rural professional, but the rural professional will run the meeting.

The key differences between the novice and expert consultant are the years of work experience in consultancy (4 vs 27 years), the degree of specialization (mainly dairy vs completely dairy) and the number of co-workers in the office (> 15 vs 1). Both have similar backgrounds except that the expert consultant worked in extension before moving to consultancy. They also currently operate similar client bases (40 – 50 clients) and focus on similar issues (production management and profitability).

4.3. The business of consultancy

Perhaps the most important feature provided by the firm the NC works for is a network for the consultants. As the NC stated *"the consultants in the firm work together yet alone*", something the EC does not have, working by himself in his region. An example of how the staff work together, yet alone, is the monthly staff meetings. These meetings can include presentations on technical information, such as an update on agrochemicals, followed by discussions on topical issues, such as the recent Land and Water Plan. Another example is the annual staff training and development workshop. Each staff member is responsible for organising and undertaking their own professional development, yet there is an annual meeting to allow the team to find out what training and development each consultant is undertaking, ensure that there is not an excessive overlap and that the range of areas required by the firm are being covered. In addition, the consultants within the firm:

- Share their expertise during their monthly meetings.
- Network as a group with rural bankers, accountants and other agricultural professionals.
- Broaden the area of available expertise within the consultancy firm.

By working within the consultancy firm and working to varying degrees with the other consultants as explained above, the NC has arguably been able to build his own skills and networks faster, and offer more value to clients than if he were working alone or in a small firm.

As with the EC, the NC prefers repeat client visits as he believes one-off visits do not provide enough time to work with the client to develop useful and effective solutions. He also has a preference for working with larger properties. The challenge of working with smaller-scale properties is that the cost of the consultancy fees is quite high on a per hectare basis for a small 100ha farm

compared to a 300ha farm. As such the difficulty for the NC is providing them with sufficient value for the cost of his visit. The EC did not exhibit a preference for working with large farms, but this may reflect his extension background that had a public good focus. The NC appears to have a more commercial focus when it comes to client selection and this may reflect the culture of the firm he is working for.

The NC charges his clients on an hourly basis and the firm pays him a salary. The NC provides a car and pays the running expenses and the consultancy firm pays him mileage. The firm also provides him with a computer, phone and access to front desk staff, who will undertake administration and will write and format reports. However, the NC is increasingly writing the reports himself. This is similar to the EC except that he works from home. Again, this reflects the differences in the nature of the two firms the consultants are working for.

4.4. A consultants attitude to problem ownership

Gray et al. (2014) argued that consultants are problem solvers, but not problem owners. Therefore prior to a first visit, consultants lack key knowledge about the nature of the problem, the business, and the client's goals and objectives. The NC's agreement that he is a problem solver and not the owner is shown by his belief that he is offering advice only and if farmers do something other than what he has advised he will work with them to make the best of any situation, a philosophy similar to the EC.

The NC also emphasised the importance of understanding the farmer and their family's goals, as explained in section 4.8.4, and gathering accurate data and cross-checking or validating information as described in section 4.9.3. He highlighted the involvement of the client in analysing and selecting the best solution for their issue. Thus the NC is trying to minimise the effect of a lack of knowledge in key areas by gathering as much quality data as possible, something also stressed by the EC.

At the end of the problem solving process the NC states what he would do if the farm were his. Thus he provides a clear statement of which solution be believes is the best for that farm in that particular situation. He even goes on to note that he can be quite blunt, and in agreement with the EC, he will continue to raise an issue if he believes it is in the best interests of the client each time he visits. At the end of the day, however, he acknowledges that the final decision and ownership of the problem lies with the client, a point also stressed by the EC.

4.5. The attributes of a good consultant

The NC believed the key attributes of a good consultant are enthusiasm, the ability to make clients feel optimistic about farming, good interpersonal skills, including being reasonably intuitive and also able to "*switch off*" when they leave a client's

property. The NC stated that enthusiasm on the part of the farm consultant is important for obtaining buy-in from a client. A consultant has to have good interpersonal skills, *"a desire to talk to other people, ask questions and be sociable"*. A consultant also has to be reasonably intuitive, that is to be reasonably perceptive of people's personalities and how people are feeling on the day, a sort of compassion. The NC noted that "*how farmers are feeling on the day*" is apparent from their actions and how they talk rather than what they say. The NC also noted that consultants "*don't have to know everything but you have to be calm enough to work it out*" i.e. not get 'frazzled'.

The literature (Kemp, Williams, Gray, Gardner, & Kuiper, 2000; Williams, Gardner, Gray, Kemp, & Kuiper, 1997; Williams, Kemp, Gray, Kuiper, & Gardner, 1997) also noted the importance of personality and interpersonal skills to be a good consultant. The EC interviewed by Gray et al. (2014) believed it to be the consultant's most important attribute. While the NC noted personality and interpersonal skills are very important, in particular for securing a first visit, he rated these attributes as equal or slightly secondary to a consultant's technical skills.

Roles a consultant can play

The NC stated that the role he can play during a visit depends on the role the farmer would prefer him to play, the issue or problem being discussed and the time available for the visit. In agreement with Gray et al. (2014) , the NC classified a farmer on their preferred style of consultancy and then tailored his own style to meet the client's needs. The NC stated that the farmers' preferred style of consultancy could vary from one visit to the next, and could depend on their interest in the issue being addressed or the level of stress the farmer was experiencing at that time. The NC noted that on the day of the visit he has to be reasonably intuitive to quickly assess at the start of the visit which mode the farmer would prefer him to use.

The NC noted two main styles of consultancy or roles that he could take with farmer clients. The first is a coaching approach where the client's don't want their consultant to tell them the answer, they would prefer that the consultant coaches them to come up with the answer themselves. This is often referred to as the role of a facilitator (Coutts, Roberts, & Samson, 2007). The second is a more direct approach. The NC stated that often clients are too busy or too frazzled and they want to know what they need to do tomorrow, they just want the solution. The EC also made this point.

The NC prefers to act as a facilitator as does the EC (Gray et al., 2014). However, the NC can adopt a more direct approach, if for example he is short of time. His concern with the direct approach is that he is often rushing through the problem solving process and not evaluating it as he goes. The EC stated that he prefers to operate in his natural consultancy style as this is less difficult and requires less

energy than his non-preferred or non-natural consultancy approach. Thus both consultants can operate in different consultancy modes, yet each has a preferred mode for different reasons. The EC also appears to play rather more roles than the NC, acting often as an educator and at times a sounding board for ideas (Coutts et al., 2007).

The social learning model (Nikolova, Riehlen, & Schlapfer, 2009) highlights that clients are involved in the diagnosis and problem solving processes along with the consultant. The involvement of the client is important as they have valuable knowledge that is useful for problem solving. This latter point was also noted by the EC. The social learning model would appear to match the NC's preferred consultancy approach of coaching.

Nikolova et al. (2009) also describes an 'expert' model where the knowledge of the consultant is considered superior to that of the clients. The client in this model simply supplies data during problem diagnosis and does not take part in the problem solving process. This description could fit the direct approach that the NC uses. However, both the NC and EC stated that they use this approach in specific circumstances, for example if they are short of time or when clients are too busy and want to know what they need to do tomorrow. Thus the use of the direct approach or expert model is dependent on the context of the visit.

4.6. Training: Building the skills and knowledge required

The focus of the NC's training was on building skills and knowledge in farm management and consultancy and then being able to use these skills and knowledge in a range of contexts. These contexts could include different environments and different farmers. For example, helping clients cope with droughts or years with a high milk price. Developing these skills and knowledge would be important for building the farm consultant's reputation which, as noted by Gray et al. (2014), is important for attracting new clients.

The NC suggested that in preparation for a career in consultancy, prospective consultants could spent 2-3 years working, *"doing a job"* where they could see a range of farming systems and develop an area of technical skill for example in irrigation or soil fertility management. This would assist a new consultant to build a positive reputation with farmers and agricultural professionals once they started their career in consultancy. The EC also stressed the importance of developing and promoting areas of technical expertise when first starting out as a consultant.

The NC noted that his training, once he joined the consultancy firm, was relatively informal, but that it *"worked well enough"*. During his training, he spent time with the other consultants in the firm and he also attended formal training provided by DairyNZ. The NC emphasised the importance of a prospective farm consultant building their understanding of a wide range of farming systems. This is in agreement with Williams, Gardner, et al. (1997) and Williams, Kemp, et al. (1997)

who stressed the importance of technical competence in building trust with farmers.

The specific skills and knowledge about farming system that the NC believed were important included:

- Working out farm programs including a calendar of events.
- Feed budgeting.
- Knowledge of feed curves in different regions.
- Knowledge of the feed requirements of stock to fit a particular feed curve.
- Developing relevant benchmarks for a farming system, for example what is an acceptable death rate, how much animal health costs are, how much feed an animal would consume.
- Compiling financial budgets.
- Compiling a gross margin, quickly.

The NC built these skills and knowledge during his training by observation, i.e. observing how the other consultants undertook the process of farm consultancy, and practice, e.g. completing small tasks or projects associated with the consultancy visit, undertaking project work for industry and running monitor farms and discussion groups. Being a member of a large firm also helped with the development of the NC because he had access to a wide range of expertise within the firm. He also had access to specialist resources that the firm held such as their client database that helped the NC develop good benchmarking skills.

Building a client base

The NC used social capital (Coleman, 1988; Fischer, 2013; Klerkx & Proctor, 2013; Putman, 2000) and his networks to build his client base. The first method that the NC used to build his client base was through utilising the firm's strong reputation and associated social networks. This method was not highlighted by the EC and reflects the difference in the firms they work for. The NC works for a consultancy firm with less than fifteen practicing consultants in the office. The EC is the sole consultant in his area and works from home. This highlights the importance of firm size and reputation in helping young consultants build a client base. This may be much more difficult for young consultants working in a small firm, particularly if its reputation is not well known in the area. Because of the firm's good reputation, new clients contacted the organisation to source an advisor. Because the senior consultants had adequate clients, these new clients were passed on to the NC. The firm's senior consultants were also a source of additional clients, something not mentioned by the EC, but again reflecting the differences in firm size. The senior consultants sometimes passed on clients to the NC. These were often farmers who were running relatively stable farming systems and not looking to change. Thus these were 'lower risk' clients, both for the senior client to pass on and for the NC to start to build their client base with.

The NC also used his own social networks to source clients. As his reputation developed, he obtained referrals from 1) other rural professionals and 2) his existing farmer clients. These were both important sources of clients for the EC. The EC stressed the importance of personal reputation in obtaining referrals, a point also made by Kemp et al. (2000). The NC also increased the size of his client base indirectly through existing clients growing their business, a point also made by the EC. The NC still had the same number of clients, but these clients either had larger farms or more farms and the latter tended to have managers who he worked with. In contrast to the EC, the NC did not view monitor farms or discussion groups as an important source of clients.

For the NC, the process of building a client base has been somewhat like a snowball. Starting slowly, gaining momentum with the number of clients accelerating in year four of his career as his reputation grew. In year five of his career, the NC has started to tailor his work mix to his own preference. Being a member of a large consultancy firm with a good reputation has helped the NC build his client base.

4.7. The consultancy process

A comprehensive, detailed description of the consultancy process used by farm consultants in New Zealand is provided in the report compiled by Gray et al. (2014) . Hence only a brief outline of the model developed by Gray, Kemp, and Gardner (1999), and used as a framework in this report, is provided. The model describes two main aspects of the farm consultancy process, the physical process and the problem solving process as shown in Figure 4.1.

Both the physical and the problem solving process occur in tandem in farm consultancy. The following sections discuss firstly the physical consultancy process and then the problem solving process used by the NC on a first visit to a new client.

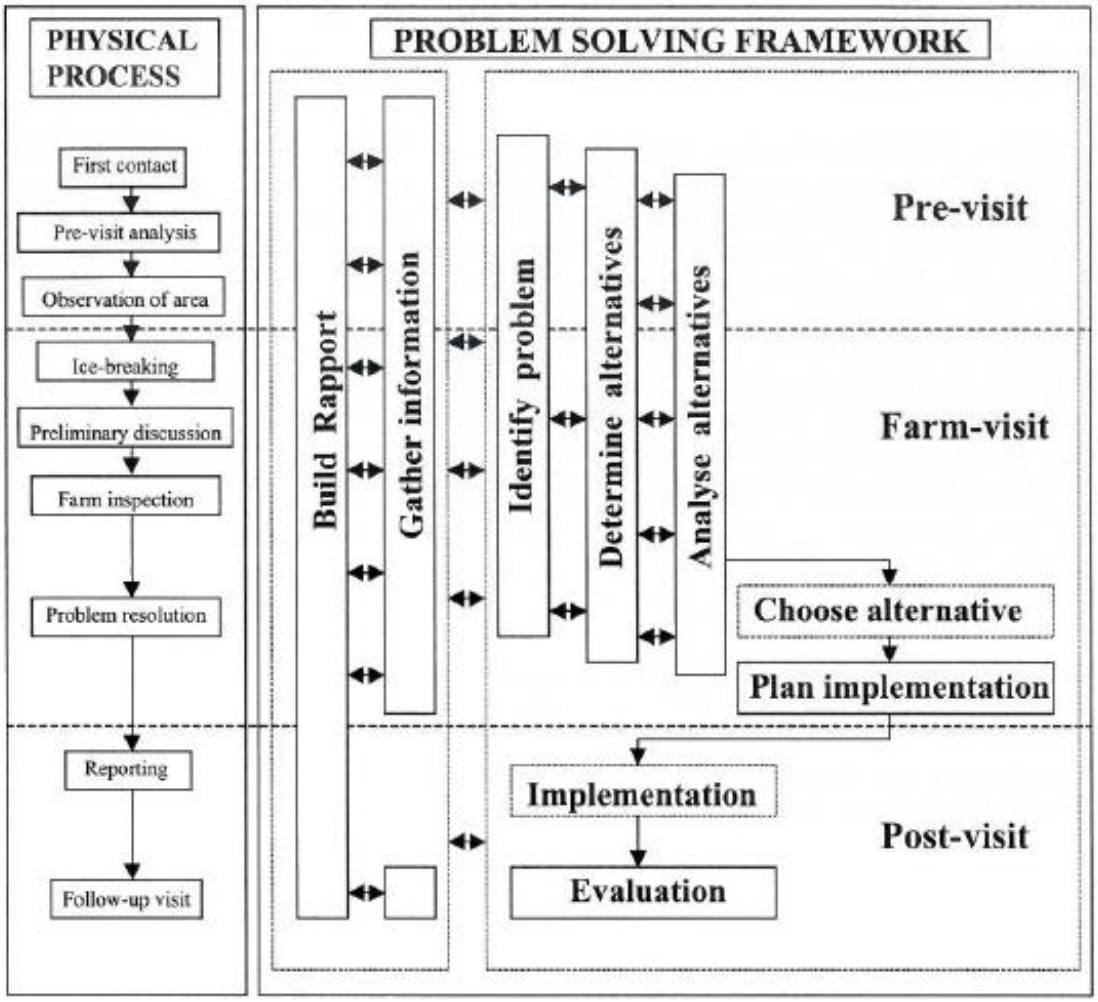

Figure 4.1 A model of the consultancy process. *Source (Gray, Kemp, & Gardner, 1999)*

4.8. The physical consultancy process

The first consultancy visit by the NC to a new client was structured along similar lines to those reported in the literature (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, Rogers, & McCosh, 1999; Rogers, Kemp, Gray, & Gardner, 1996; Rogers, McCosh, Gray, Kemp, & Gardner, 1996). Unlike the EC described by Gray et al. (2014), the NC does not undertake an engagement visit to a client. The engagement visit was used by the EC to secure a client rather than help the client solve a problem, and as such the EC did not charge a fee for that visit. This difference may reflect the more commercial focus of the NC's consultancy firm and the need to accrue chargeable hours.

4.8.1. Contact

In agreement with the EC interviewed by Gray et al. (2014), the NC never cold calls a farmer. Rather, new clients are obtained through referrals or via the consultancy firm, highlighting the importance of social capital (Coleman, 1988;

Putman, 2000). These may be potential clients that ring the firm and are passed on to the NC because the senior partners have a full client list or they may be existing clients of senior consultants that are passed on to the NC. Normally first contact occurs over the phone and during this phase the NC aims to identify the issue facing the client and to organise a time and date for the first visit, a process similar to that used by the EC and reported in the literature (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, Kemp, et al., 1996; Rogers, McCosh, et al., 1996).

The initial contact with a farmer is a three to four minute phone call. The first two minutes involves ice-breaking conversation, discussing socially safe topics such as the weather, milk price or the farm program. Following the ice-breaking conversation, either the farmer or the NC will bring up the purpose of the visit. The NC will try to determine what the main issue is and may collect some limited, preliminary information as this will put him in the "*right sort of space*" in relation to the focus of the visit. In comparison, the level of information collected by other experienced consultants was found to vary from very little to quite broad (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999).

4.8.2. Pre-visit preparation and analysis

The NC noted that "*often the issue the new client specifies on the phone is not the true issue that is concerning him".* Thus he uses the initial contact to identify the focus of the visit, but will do little pre-visit preparation preferring to gather and validate information on-farm. However, if the issue to be discussed is financial, the NC will request access to the client's accounts. The NC has no hesitation requesting the financial accounts as he believes these are important to understanding the financial situation of a farming business. The NC has a strong preference to work with farmers who are willing to provide their accounts as he has found that these farmers are more 'open' and better to work with. The EC did not request the accounts from a new client until the end of a first visit when he had established if there was a financial problem on the farm. The EC uses non-financial data to determine if there is a financial problem on the farm and if this is identified, he then requests the accounts. He does this because financial information is a sensitive issue for most farmers. Other studies of expert consultants have reported that accounts may be sourced before a visit or during a visit. Some consultants find that the accounts provide them with a good understanding of the business before they visit the farm (Gray, Kemp, & Gardner, 1999). Others prefer to obtain the accounts if they are required or once they are on the farm (Gray, Kemp, & Gardner, 1999). If the issue relates to problems associated with their production system the NC will not ask to see the accounts.

If the focus of the visit is not financial, the NC will do little pre-visit preparation in agreement with the EC. He will ask his colleagues if they have a history with the client, and will approach a rural bank manager or accountant mentioned by the

farmer to obtain general background information. The EC may also ask other rural professionals about a new client before he visits them, but this only occurs if he meets them by accident, unlike the NC, he does not actively seek these people out.

4.8.3. Drive to the farm and observation of the area

The NC will always drive out to the farm to meet the client as he states "*it is difficult to give an opinion about something you cannot see".* In agreement with other studies (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, Kemp, et al., 1996; Rogers, McCosh, et al., 1996), but in contrast to the EC described by Gray et al. (2014), the NC does observe the area on his way out to visit a new client. This difference may be because the EC works in a much smaller geographical area than the NC and is visiting farms in his area 8 – 10 times per week. As such, he has a very good knowledge of what is happening in his area. In most districts that the NC works, he knows other farmers in the area and has built up benchmarks for the physical and financial productivity of those farming systems. The importance of this 'area knowledge' is shown by his comment that he finds consultancy in these regions *"easier"* than regions where he has fewer clients and hence less knowledge. Gray et al. (2014) , reported that the EC used the time during the drive to the farm to plan the consultancy visit, rather than observe the district. The NC, however plans the consultancy visit with the farmer once he arrives at the farm.

4.8.4. Arrival at the farm and ice–breaking

The NC stated that he tries to meet the client and their partner (and the farm manager if they have one) on the first visit. The EC did not stress this, but he stated that on the first visit, he needed to meet the people who are interested in the farm and who influence the decision making. If a partner had no interest in the farm and no influence on the farming decisions, the EC will not make an effort to meet them. After he arrives at the farm, the NC may undertake 10 minutes of ice-breaking conversation in agreement with the other studies (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, Kemp, et al., 1996; Rogers, McCosh, et al., 1996; Williams, Gardner, et al., 1997; Williams, Kemp, et al., 1997), although he noted that the length of the ice-breaking conversation can depend on his mood, the amount of time pressure he is under and the number of issues the farmer has identified for the visit. If there are a number of issues to be addressed he will sit down for a cup of tea with the farmer and develop a "*game plan*" for the day with them. If there is only one issue, the NC's preference is to head straight out on the farm after a short period of ice-breaking conversation. This is because the NC has found that farmers are more comfortable and likely to 'open up' when driving around the farm in a ute rather than sitting around the kitchen table. Other authors have noted that while ice-breaking conversation normally occurs at the kitchen table, it can also occur at

the dairy shed or out on the farm (Gray, Kemp, & Gardner, 1999; Kemp et al., 2000).

In agreement with Gray, Kemp, Gardner, et al. (1999) and Gray, Kemp, Gardner, et al. (1999), the NC collects information about the farming family, the farm system and the farm business after the ice-breaking conversation. With regards to collecting personal information, the NC pointed out that a consultant doesn't want to be too blunt when obtaining information about the clients' personal circumstances and goals. Early in the visit he doesn't ask too many personal questions, but "*will chip away at bits throughout the day"* as he builds rapport with the client, and as such personal information is collected throughout the visit.

Farmers' goals and personal information are collected in tandem with technical information. The NC will ask a question about, for example breed of stock, and then ask a supplementary question *"why do you do it"*, as this allows the farmer to explain why. This provides information on the future direction and aims of the farmer and provides context to the production and financial performance of the farm business. In this way, the NC gathers information on the farmer's goals and personal situation by alternating between topics for blocks of time of between 5 – 10 minutes. For example, he might spend 5 minutes on personal issues, and then 10 minutes of farm issues. The NC noted that this is a less intense way of questioning the farmer. In effect, he is diluting the time spent asking more sensitive questions about the farmer with time spent asking less sensitive questions about the farm. The EC has a slightly different approach because he has already undertaken an engagement visit before this visit. He does however go over the information he collected on the engagement visit and collects similar material to the NC. The EC did not mention breaking the discussion up into 5 – 10 minute blocks.

In contrast with Gray et al. (2014) , the NC did not mention asking the farmer to restate the reasons for the visit, as recommended by the EC. Other studies (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999) have also mentioned that experienced consultants would cover this with the client sometime during the preliminary discussion period. Unlike the EC, the NC did not describe the services he can provide to the client at this stage of the visit. Other studies (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, Kemp, et al., 1996; Rogers, McCosh, et al., 1996) have reported consultants undertaking this process after the ice-breaking phase, but before the information collection phase.

An important difference between the novice and the expert consultant was identified during this phase of the visit. Normally during the preliminary discussion, the EC collects information that allows him to calculate 4 – 6 important KPI's and benchmark the farm. He uses these to identify potential issues and then discusses these with the client before the farm inspection. Other studies (Bruce,

2013; Gray, Kemp, & Gardner, 1999) have reported this stage, but not until the problem resolution phase of the visit. The EC does this at a much earlier stage and he does this so that he narrows down the number of issues he has to investigate during the farm inspection.

4.8.5. Farm inspection

The NC prefers to start the farm inspection as early as possible in the consultancy visit, as he finds the farmers are more comfortable and more 'open' during the drive around their farm, a point made by one of the consultants in the study reported by Rogers, McCosh, et al. (1996). In contrast, the EC tends to start his visit with a cup of tea around the kitchen table and then move out onto the farm after this. The NC generally starts the farm inspection at the farm dairy, and he will also try to visit each paddock on the farm if the issue relates to feed budgeting.

The general farm inspection process used by the NC is similar to those reported in the literature (Bruce, 2013; Gray, Kemp, & Gardner, 2000; Gray, Kemp, & Gardner, 1999; Rogers, McCosh, et al., 1996). Whilst on the farm inspection, the NC gathers information and also undertakes validation or triangulation of the information he has gathered, a point also made by the EC. Some example questions asked at the farm dairy are shown in Table 4.1. He also gathers information through observations and reading documents, if available, such as fertiliser reports on the drive around the farm. The EC also asks questions and used documents, but also emphasised the role of observation and that he spends most of this phase listening to the client and building a picture of the farm business.

The NC also stated that he takes the farmer's partner on the farm inspection. The NC also seeks input from any of the clients or associated staff who are not contributing to the conversation to validate information. By stopping in each paddock, the NC is able to cross-check the farmer's pasture cover measurements, another form of triangulation and one undertaken by the EC. For example, for a feed budgeting issue he may cross-check the farm's average pasture cover level and how much feed each stock class is being fed. The NC stressed that he is also looking for issues that the client has not mentioned, a point also highlighted by the EC. For example, to check for any issues that the client has not mentioned, at the end of the discussion at the dairy shed the NC will ask the farmer "*what else is going on".* He also believes the drive around the farm is critical for prompting the farmer to bring up any other issues that he has forgotten to mention. This is an important part of the NC building a correct picture of the farm to ensure he doesn't do work based on incorrect assumptions.

Gray, Kemp, and Gardner (1999) noted that some consultants made recommendations at the end of the farm inspection, while others waited until the problem resolution phase. The NC does not make recommendations at this stage with a new client, but he may do this with existing clients. The EC also does not

make recommendations at this stage because he does not have full information about the problem situation.

4.8.6. Problem resolution

During the problem resolution phase, the NC and the client return to the house for a final discussion, as reported in other studies (Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996). This final discussion takes between 1 to 2 hours. In the case of the EC, he summarises the key points for both himself and the client (Gray et al., 2014). Other studies have reported that during this phase, consultants may highlight the strengths and weaknesses of the farm and farmer (Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996) or ask the clients for their views on the strengths and weaknesses (Gray, Kemp, Gardner, et al., 1999), or discusses the main problems and opportunities they have identified and verify these with the client (Gray, Kemp, & Gardner, 1999; Rogers, McCosh, et al., 1996). None of these methods were mentioned by the NC, however he completes any problem identification (section 4.9.4) and then determines, analyses, and then selects the most appropriate solution (section 4.9.5). Other consultants also discuss possible solutions with the client during this phase (Gray, Kemp, & Gardner, 1999) and then ask the client to select the option that best suits their situation(Gray, Kemp, & Gardner, 1999; Rogers, McCosh, et al., 1996). The NC also involved the client in solution development and will ask the farmer to select the solution they believe is the best for their situation.

At the end of the visit the NC will spend 4-5 minutes summarising the key decisions and actions that the client needs to undertake, a step also mentioned in other studies (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996) and undertaken by the EC. The NC also checks with the client to ensure that all of the issues have been covered, something the EC also does.

4.8.7. Reporting and post-visit analysis

In terms of reports, the NC always produces a formal written report for clients who have problems. For other clients, the level of reporting depends on their preference. Some farmers do not want a report, they just want to know the 3-4 key points from the visit, while other farmers want a formal report. As the NC stated "*some people are quite happy with pen scrawled on paper, but there is a growing desire for a formal report, particularly in the under 40's".* The NC noted that writing the report on farm was more efficient than writing it back at the office. The first section of his report is a summary and contains the tasks that the client needs to undertake. The remainder of the report sets out how he and the client came to those decisions. Normally the latter section will contain a livestock plan with a map showing where and for how long stock will graze. The level of the plan (operational, tactical or strategic), and the level of detail it contains will depend on the farmer's preference and needs. Other studies have mentioned that the

nature of the report provided by a consultant varies from a few pages of hand written notes to formal typed reports with budgets and detailed recommendations (Gray, Kemp, & Gardner, 1999; Rogers, McCosh, et al., 1996). However, they did not mention if reports varied by client. Unlike the NC, some consultants write their report back at the office (Gray, Kemp, & Gardner, 1999; Rogers, McCosh, et al., 1996). To save time, the EC uses a Dictaphone to write his report on the way home from the farm. It is typed up by his administrator and then proofed before it is sent out to the client. The EC stated that to maintain a professional image, he provides all of his clients a written report. However, these are rarely longer than three pages because his clients tend not to read anything longer than this. As such, he does not tailor his report format to his clients in the way the NC does.

The NC, like most consultants reported in the literature (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999) completes any analysis either pre-visit (accounts analysis) or when he is out on the farm. In contrast, the expert consultant in a study by Bruce (2013) undertook analysis of a client's farming system back at the office after the first visit and then went back for a second visit to discuss this with the client. Similarly, if his client has a profitability problem, the EC will analyse their accounts using Dairybase at his office after the first visit and then discuss this with the client during a second visit.

4.8.8. Follow-up visit

The NC phones his client a month after the visit to find out if they have implemented any changes and how the plan is working. The phone call takes approximately 10 minutes, although more recently the NC has started using e-mail, so that the client can reply at a time convenient for them. In contrast, the EC will phone a client within a few days of the visit to see how they are going. He finds this is useful and also good for building further rapport with the client.

In most instances, the NC has found that his recommended plan is working well, however if it isn't he will "*walk them through"* some alternatives. Other studies (e.g. Bruce 2013) have reported that consultants visit their clients to evaluate the implementation of the plan and the suitability of the solution for the client. The NC will then re-contact the client the following month, to ascertain how the revised plan is working. If the alternative solution is not working, it will now be two months since the initial visit and the client's reaction will depend on the rapport the NC has built with them. If the NC has developed a strong rapport with the client they are more likely to overlook a less than successful plan. If the NC has poor rapport with the client and the plan has not worked it is likely he will not be invited back to the farm. This emphasises the importance of rapport building which is further discussed in section 4.9.1.

The timing of the NC's repeat or follow-up visit depends on the client and the complexity of the issue they are addressing. For example, the NC is currently visiting a client every ten days who is undertaking a dairy conversion. In contrast,

he visits another client on a monthly basis. Normally the EC will visit a new client a month after the first visit. The EC believes that for a consultant to be effective, he needs to be visiting clients on a regular basis (monthly or every two months). As such, the EC aims to have more regular contact with his clients than the NC.

4.9. The problem solving framework used by the consultant

The previous sections described how the NC undertook the physical phases of a first consultancy visit, and compared this to the literature and the EC. The following sections describe how the NC undertook the eight steps in the problem solving process, as shown in Figure 4.1. The eight steps of the problem solving process used by consultants were set out by Rogers, McCosh, et al. (1996) and Gray, Kemp, and Gardner (1999). They are: 1) build rapport, 2) gather information, 3) identify the problem, 4) determine alternatives, 5) analyse alternatives, 6) choose an alternative, 7) plan implementation, and 8) evaluation.

Consultants spend the majority of their time on a first visit gathering information and diagnosing the problems (Gray, Kemp, & Gardner, 1999; Rogers, McCosh, et al., 1996). With this study it was not possible to estimate the proportion of time spent on these two steps, however, the NC did emphasise the importance of building or developing an accurate picture of the farming business, a process known as 'situation assessment' (Klein, 1998; Lipshitz & Shaul, 1997) which then leads to 'situation awareness' (Endsley, 1997).

4.9.1. Rapport building

The NC noted that rapport was important to obtain sensitive information about a farmer's personal circumstances and goals (see section 4.8.4) in agreement with the literature (Kemp et al., 2000; Williams, Kemp, et al., 1997) and the EC (Gray et al., 2014). The EC also noted that rapport was important to secure an engagement visit and then secure and retain fee paying clients. The former aspect was not important for the NC as he did not use engagement visits. However, he did realise the importance of rapport in retaining clients.

The NC built rapport by:

- Undertaking ice-breaking conversation during the first contact via telephone and in the initial conversation on the first farm visit.
- Moving to an environment where he believed the farmer would be most comfortable i.e. the ute, as soon as possible in the initial farm visit.
- Finding out why the client was farming the way that they are, by adding a 'why' question when asking for farm or technical information.
- Asking questions in time blocks of 5 - 10 minutes and mixing up personal and technical questions, which he felt was less intense and more comfortable for the farmer.

- Tailoring questions to the level of rapport that he had established with the farmer.
- Being positive and enthusiastic.

Most of the above techniques were used by the EC and have been reported in the literature (Kemp et al., 2000; Williams, Kemp, et al., 1997) with the exception of the use of time blocks. The NC is aware of his strengths in terms of consultancy. While he noted the importance of building rapport to obtain personal information from the farmer, he also acknowledges that his soft skills are not suitable for dealing with highly sensitive family issues such as succession. One difference between the EC and NC is the greater emphasis the EC places on soft skills.

4.9.2. Information gathering

The NC's aim in relation to information gathering was to obtain all relevant information to identify problems facing the client and to triangulate that information to ensure it was accurate. The NC had also learnt not to initiate the diagnostic process until he was sure the information was accurate. Other studies have reported that experienced consultants are aware of the risks associated with information provided by a client and as such, they treat any diagnosis as a tentative hypothesis until it can be verified (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Rogers, Kemp, et al., 1996; Rogers, McCosh, et al., 1996). Information gathering was used by the NC to collect information for a number of reasons. First it was used to build a picture of the client, farm family and farm business. Second it was used to build rapport with the client. Third it was used to diagnose the problems faced by the client. Fourth, it was used to tailor solutions to the client's situation. Fifth, it was also used to "baseline" the farming system so that the consultant has a record of where the farm was at before he intervened. This is important for demonstrating to the client the impact of his involvement and the value he has added to the business over time.

In agreement with Bruce (2013) and the EC, the NC used three main methods to gather information from a farmer client:

- Observation, the NC placed particular emphasis on his observation skills during farm inspections to ensure that the information he was gathering about the farm was correct.
- Questioning, the NC used a semi-structured interviewing technique. The NC also has a policy of seeking input from the more reticent individuals on the farm because they often provide useful insights into the problem situation.
- Information available from documents. For example a feed wedge from MINDA Land and Feed or Pasture plus, soil fertility information from Ravensdown reports. However this information is not normally available until visit two or three with the client as the NC requests the client provide this information.

As previously noted (section 4.8.5) the NC collects information on the farmers' goals, reasons for farming the way that they do, family, and farm systems information, noted in Table 4.1, and if the client has issues in relation to profitability, financial information.

The NC stated that he should have a checklist of information that he should gather during the farm inspection, but he does not. However on further questioning he describes specific questions and topic areas which are shown in Table 4.1. This highlights that information gathering can be intuitive, and areas for questioning and specific questions held subconsciously and thus difficult to articulate. The NC's list of questions noted in Table 4.1 could be a mental schema or script as described by Endsley (1988). This mental script organises/categorises information and the relationships between them. Mental schema are used by other consultants in farm consultancy (Gray et al., 2000; Gray, Kemp, Gardner, et al., 1999).

Table 4.1: The NC's list of questions in two areas of farm consultancy

Questions asked at the farm dairy	**Areas for questioning to investigate a financial issue**
Actual milk production levels	Income
Target milk production levels	Debt servicing ability
Somatic cell counts	Farm working expenses, if too high investigate starting with labour, fertiliser and feed
Milk quality grades	Drawings
Dairy shed issues	
Staff issues	
Animal health – what is the major problem, feet, mastitis?	

In agreement with the EC interviewed by Gray et al. (2014), the NC starts by gathering data through observations and questioning, i.e. it is data driven with information gathered in general theme areas (Gray, Kemp, & Gardner, 1999). However, when he identifies an issue of possible interest, he starts collecting data related to that particular issue, i.e. the data collection process becomes goal driven (Gray, Kemp, & Gardner, 1999).

The NC emphasised that in he is always *"looking for issues that the client has not mentioned"*, a point also mentioned by the EC. At the end of the discussion at the dairy shed he does this by asking the farmer "*what else is going on".* He also believes the drive around the farm is critical for prompting the farmer to bring up any other issues that he has forgotten to mention. The role of the farm inspection in prompting a client to bring up issues has not been mentioned in the literature or by the EC. This is an important part of the NC building a correct picture of the farm to ensure he doesn't do work based on wrong assumptions.

4.9.3. Picture building

As noted by Gray et al. (2014) information is of little use until it has been processed. The NC used a variety of methods to process data including triangulation, benchmarking and comparative analysis, which allowed the consultant to classify clients as reported in the literature (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999). In agreement with the EC interviewed by Gray et al. (2014) , the NC did not mention the use of trend analysis. This could be due to the first consultancy visit being the focus of both studies, in which case there has been little time for trends to emerge or be used by the consultant.

Triangulation or validation was an important method of processing information for the NC. He explained that in the past he had done a lot of work for clients based on incorrect assumptions which resulted in a waste of time and energy and this is something he does not want to repeat. In agreement with the EC (Gray et al., 2014), he tries to cross-check as much information from the client as possible. As such he puts a lot of time and energy into ensuring that he develops or builds an accurate picture of the farm business, he is "*front loading it*". The NC uses four main sources of information for triangulation:

1. The farmer's partner. The NC will endeavour to take the farmer's partner on the farm inspection because he/she will often correct inaccurate information provided by the farmer.
2. The more reticent people on the farm. The NC will always ask questions of *"those not doing the talking"* as they can provide useful insights into the farming system and what is happening.
3. His own observations. The NC compares his observations to the client's e.g. pasture measurement. The NC will use a rising plate-meter and compare his assessment to that of the client.
4. Documents. These include financial accounts, soil fertility reports, feed wedges and so-on.

The NC classifies his clients on the basis of who provides accurate information, a process also used by the EC. However it can take 2-3 visits to determine this. As such the NC is using temporal triangulation, comparing the accuracy of information provided by the farmer both within and across visits, something the EC also did. The NC also undertakes triangulation by information source, which is comparing information from the farmer with his own observations in the field or from documents. These methods of triangulation were also used by the EC, who also compared what the clients perceived with what the consultant observed and what the farmer says he does with what they actually do.

Benchmarking and comparative analysis

The NC stressed the importance of triangulation to ensure that accurate information was used in the consultancy process. He, in agreement with other

studies (Bruce, 2013; Gray et al., 2000; Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996) also used benchmarking, comparison and classification to build a picture of the farming family, system and business.

One area of classification not noted by the EC was the farmer's potential as a client. The NC used two criteria to assess this. First he assessed their potential ability to work together, or what the EC referred to as their compatibility. The EC believes that consultancy is a "personal game" and that a key issue is compatibility between the consultant and the client. The consultant stressed the importance of social skills in his role as a consultant. This has been highlighted in several studies (e.g. (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Kemp et al., 2000; Williams, Gardner, et al., 1997; Williams, Kemp, et al., 1997)) where they reported the importance of interpersonal communication skills in the development of rapport between a consultant and a client and the importance of this for effective problem solving. The second criteria used by the NC was the degree to which he could add value to the client's business to ensure that the relationship would be valuable to both parties. The EC did not mention this as a criteria, but he did consider what value he might be able to add to the client's business. He uses a benchmarking process based around 4 – 6 key performance indicators and uses these to identify what areas could be further improved on the farm. The benchmarking data helps the EC identify where he might add value to the client's farm.

The EC used eight techniques to assess the management capability of a client across different domains (e.g. grazing and financial management (Gray, Kemp, Wood, & Westbrooke, 2017)). For each knowledge domain the consultant, firstly determines if there are discrepancies between stated and actual practice, then he compares the client's decision making processes to best practice. Third, he determines the degree of monitoring the client uses, which is often a good indicator of capability. Fourth, he compares the client's assessment of the state of the farm's resources (e.g. post-grazing residuals) with his own observations. Fifth, he challenges the client about their practices, then evaluates the client's understanding of the principles within that particular domain and then assesses the discourse that the client uses. Clients with good capability in a domain tend to use a more "technical" discourse. The consultant uses this information to determine the client's management capability (poor, average, good) across key domains. Finally, he compares the client's performance against appropriate benchmarks (e.g. MS/cow, MS/ha).

Areas where the client's capability is classified as poor, often identifies a problem. Given the NC's emphasis on observing what was happening on the farm, input, output and timing data provided by the client were most likely compared to his own observations. However, the NC's process was less sophisticated than that used by the EC to assess the client's management capability.

Table 4.2: Table 4-4 Methods used by the EC to diagnose a knowledge gap

Diagnostic methods
1. Triangulation of what the client says he does and observation of what he actually does 2. Comparison of the client's practice with "best practice" 3. Determining what the client is monitoring in relation to the domain 4. Comparing the client's assessment of the state of resources with the consultant's assessment 5. Challenging the client about his practice 6. Assessing the client's understanding of the domain 7. Listening to the discourse used by the client about the domain 8. Benchmarking the client's performance in that domain

The NC also diagnosed farmers 'knowledge gaps' in line with the EC. However the NC used a lack of client information about an issue as an indicator that the client had a knowledge gap in a particular domain. For example, if a client could not tell the NC his overdraft position the NC inferred that the client is likely to have a limited understanding of the costs of production and may undertake goal-directed questioning to find out more detail. In contrast, the EC used eight different techniques to identify knowledge gaps (Gray et al., 2017). So the EC had a more sophisticated approach to identifying the client's knowledge gaps.

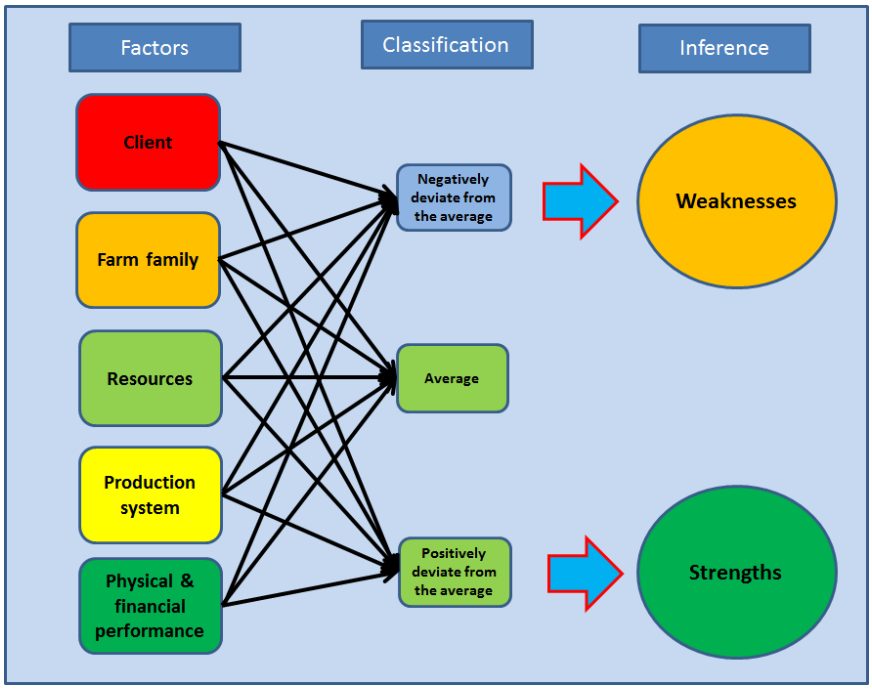

Figure 4.2 The use of the classification process to identify strengths and weaknesses

The NC did not specifically describe the use of classification to identify the strengths and weaknesses of the client as the EC did (Figure 4-5). The NC did

however, investigate each of these areas. The financial performance of a clients' business was investigated by comparison with the NC's benchmarking data which also showed the financial strengths and weaknesses. The strengths and weaknesses were also investigated, for example, at the start of the farm inspection, as described in Table 4.1. The use of the farm's strengths in the consultancy process was not specifically described by the NC, however the weaknesses were used to highlight potential problem areas for the consultant. Thus both the NC and EC classify farmers in a number of areas, however there are some differences in the areas that they classify farmers and the specific methods they use to classify farmers.

4.9.4. Problem identification

Importantly, the NC distinguished between identifying that there is for example, a feed shortage and diagnosing why that feed problem has occurred, two different processes: problem identification and problem diagnosis. The NC did stress that the feed shortage was not really the problem, the real problem was what had caused the feed shortage. The NC was unsure how he identified the problem and commented that he had not really considered it before the interview. Although he found it difficult to articulate specifically how he diagnoses a problem, the NC did describe components of the process. This suggests the EC has more self-awareness of his practices than the NC.

The NC stated that there may be indications of what the problem is during the initial contact phase. For example the new client may have stated that he had been referred to the NC because he had financial problems. However, the NC was cautious about using this information and would still double check that the client really did have financial problems. Instead, he used this initial information as a starting point for his problem identification and diagnosis "*this puts you in the right sort of space".* He also noted that "*often the issue specified on the phone is not the true issue that is concerning them".* This point has also been made by consultant in several other studies (Kemp, Williams, Gray, Gardner, & Kuiper, 2002; Williams, Kemp, et al., 1997), that they do not jump to conclusions about the nature of the problems facing a client. This is because the consultant is not the problem owner and often does not have full information about the problem situation (Kemp et al., 2002; Williams, Kemp, et al., 1997).

The NC used the farmers' ability to provide data and information as another indication of a potential problem area. The EC uses a client's lack of monitoring in a particular domain to help him identify a potential problem area (Table 4.4).

Table 4.3 describes the two themes that the NC gave as specific examples of the questions he asks the client and what he infers from the client's response. Other potential areas are described in Table 4.1. This process demonstrates the NC's use of both classification and a mental schema to 'drill down' to this issue in the problem identification process. This process was also used by the EC and has been

recorded in another study of New Zealand farm consultants (Gray, Kemp, Gardner, et al., 1999). The NC firstly classifies the broad problem, for example by the farmers response to the questions posed in the second column of Table 4.3. He then uses his mental schema or questions (for example column four) for that area to both confirm that the problem exists and to focus on the specific issue. The process is important for both picture building and problem identification as both are closely inter-related.

Table 4.3: Indicators of a potential problem area

Theme	Can the client…	If no, the consultant infers that the farmer….	Which leads to questions around
Production	• Describe the timing of farming practices • Give data on farm outputs and inputs	• Is unsure of what they are doing production wise	The timing and description of farming practices, inputs and outputs, more in depth triangulation.
Financial	• Explain where the overdraft is sitting	• Is likely to have a financial budgeting problem and/or a limited understanding of their costs of production	• How the client does their budgeting • How the client monitors their financial position • Who does the GST • Do they compile an annual budget and stick to it?

The NC also uses benchmarking or comparative analysis to identify potential problem areas. He described in Table 4.1 specific questions in the areas of production and finance. Within each area, the NC has a range of benchmarks with which he compared the client's data. In agreement with the literature (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, Kemp, et al., 1996; Rogers, McCosh, et al., 1996), if there was a significant difference between the client's performance and the benchmark this indicated a potential problem. However, it was difficult to extract the NC's problem identification process because much of the process was intuitive and difficult for the NC to articulate. This again highlights that the EC has a greater awareness of his processes than the NC.

The EC also classified his client's problems in terms of the high level causes of these problems and these were: knowledge gaps, attitude problems and social norms (Gray et al., 2014). The NC identified personal constraints that were important when working with a client. He identified whether a client's skills needed improving (e.g. did a client's pasture management skills needed

improvement). He considered if the client and himself could work together, but this is about compatibility, a point also stressed by the EC (Gray et al., 2014). The NC did not specifically mention attitudes as a high level problem cause and nor did he mention social norms. These differences reflect the difference in the level of sophistication between the EC's and NC's mental schemas in relation to high level problem causes.

While agreeing with the EC on the importance of correct problem diagnosis, the NC did not specifically mention describing the problem to the client with evidence and asking for the client's feedback, as the EC was reported to do (Gray et al., 2014). The NC did involve the client in the determination, analysis and selection of the most appropriate solution for the problem, which was a way of obtaining both clarification of the issue and feedback from the client.

4.9.5. Determine, analyse and select between alternative solutions

The EC considered several personal constraints such as knowledge gaps, attitude problems and social norms. In contrast, the NC emphasised the processes that he used to compare alternative solutions. This may reflect the more technical consultancy approach of the NC compared to the more inter-personal approach of the EC. Alternative solutions for an issue arose for the NC from analysing 'different scenarios to improve the farming situation', 'working back from a desired end goal', or 'drilling down' to identify the issue.

To provide a solution for a particular issue, the NC and client analysed and compare a range of different scenarios. The generation of a scenario often involved the NC bringing together different "fragments" from other farming systems into a package for the client. The analysis and selection of a solution to implement on farm, can happen in two stages. Firstly, the NC and the client will discuss several solutions at a general level, often the NC will use Farmax to provide benchmark data to help himself and the client to decide which solutions to investigate further. The client would then usually select one or two solutions to investigate. The NC stated that one of the client's solutions is usually *"not too far away"* from the final solution selected for the farm. The reason the client's solution is similar to the one that is finally selected is because they are the problem owner and have a good knowledge of the problem, the business and their goals and objectives as discussed in section 4.4. Thus the first step in the NC's analysis and selection is to reduce the number of possible solutions down to the few that warrant more in-depth analysis, a process that has been identified in other consultancy studies (Bruce, 2013; Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996). The second step, the in-depth analysis, may involve a solution suggested by the client and 2-3 of the NC's. All of the scenarios are analysed at the same time. The analysis includes conducting a SWOT analysis, from the perspective of minimising risk for the client. For each solution, the NC calculates the cash surplus that it will generate because this is the figure the clients

are interested in. This was a point the consultant in Bruce (2013) study made and stressed that a good solution should improve the cash surplus by at least $30,000 per annum for an enterprise mix problem.

Working back from a client's desired position at some future date is another technique the NC uses to generate alternative solutions to a problem. This is a form of gap analysis (Gray et al., 2014) that has been identified in other studies. The NC noted that this approach works with diverse issues such as succession and feed budgeting. There are subtle differences in the analysis and selection of solutions between this approach and the NC's other approach where he analyses a range of solutions. In this approach, a range of solutions are not generated at the outset, but rather arise during the 'working back from a future point in time'. For example, with feed budgeting, the NC would focus on what state the client would like the farm in, say the following autumn. He would then develop a feed plan with the client working backwards from next autumn to achieve this end point. As they work through the solution, the NC discusses the various decisions with the client. Thus, the analysis of different alternatives is undertaken during the 'working backwards' process.

With the 'drilling down' approach, the problem is identified by 'drilling down' into it as outlined in section 4.9.4. Whilst drilling down' into the problem, the NC is also determining and analysing different alternative solutions, in a similar way to the technique of 'working back from a clients desired position'. For example with a financial issue, the NC works though the mental checklist of questions in Table 4.1, to identify the problem. It could be argued that he is also dismissing unsuitable solutions whilst doing this.

Gray, Kemp, and Gardner (1999) reported that the consultants in their study had a set of solutions for each problem area. They found that the consultants in their study used constraints (e.g. goals and objectives, management capability (knowledge and skills), attitudes and beliefs, resource constraints and family constraints) to screen the consultant's large set of solutions to a smaller set of "feasible" solutions which were then presented to the client. The consultants in Gray, Kemp, Gardner, et al. (1999) study then discussed these with the client to determine the final solution. The consultants in these studies also subconsciously disregarded unsuitable options prior to discussion with their client. The NC may have undertaken this process, but he found it difficult to describe his problem solving process as it was intuitive and subconscious. He ensures that the client has an input into the solution, as described in section 4.9.5. This ensures that the client has buy-in and ownership of the final solution, a point also stressed by the EC (Gray et al., 2014). Also the discussion phase provides an opportunity for the client to highlight any difficulties in implementing the plan, and the NC can, if necessary make changes to the plan implementation which is the next step in his process.

The NC used a two stage process that is similar to that reported in other studies (Bruce, 2013; Gray, Kemp, & Gardner, 1999). The two stages are firstly to reduce a large list of possible solutions down to a much smaller set for further in-depth analysis. Secondly, the NC then undertakes an in-depth analysis of these solutions. Solutions can be identified by the client or the NC, and analysis of these options is done via discussion, SWOT and financial analysis. The final selection may not be a straight forward selection of the best option, rather it may be a case of negotiation and compromise, between the client and NC.

4.9.6. Plan implementation

The consultant is a problem solver and not the problem owner (Rogers, McCosh, et al., 1996). As such, he is not responsible for the implementation of the plan he has developed with the client. However, he does help the client plan the implementation of the solution. The NC plans the implementation of the solution by tailoring it to the client's needs and preferences. The EC develops an action plan for his clients. It sets out the activities the client will implement over time and the factors he will monitor to ensure effective implementation. Kubr (2002) noted that one of the aspects missing from proposals presented to clients in corporate consultancy was a realistic and feasible plan for the implementation of the proposal. He argues that such a plan should not only include what to implement, but how to do it. Little is written in the agricultural consultancy literature about developing an action plan. Most studies (e.g. (Gray, Kemp, & Gardner, 1999; Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996) just mention that the consultants develop an action plan to solve the problem, but provide little further detail.

The NC also noted that he has to be realistic about the level of change that can be achieved in one consultancy visit, a point also made by the EC (Gray et al., 2017). In addition the speed at which change can be implemented on farm has to be matched with what the client is comfortable with, something also stressed by the EC (Gray et al., 2017). The NC might suggest a major change in the farming system if necessary, however most farmers prefer gradual change, so the NC may spread the change over several years. The point was also made by the EC in Gray et al. (2017) study.

As with the EC, the NC also leaves clear directions on the changes necessary to the farming system. He does this by providing a summary at the end of the visit. He spends 4-5 minutes at the end of the visit summarising the key actions that the client needs to undertake and the key decisions they have agreed upon. He will also provide a written summary, either a formal report or notes from the visit as described in section 4.8.7. The consultant in Bruce (2013) study stated that plan implementation was an important part of the consultancy process because it helped ensure the change was implemented correctly.

4.9.7. Implementation and evaluation

If during the initial consultancy visit, the NC developed a plan requiring complex changes, he stated that he would visit the client on a regular basis to help with the implementation. Prior to a follow up visit, the NC would review the plan he had developed with the client and identify what they agreed would happen over the planned period. Once on farm, he would again work though the plan with the client and compare the suggested changes with what had occurred in practice. He would also identify which suggestions had not been implemented or any deviations from the plan. They would also discuss whether they thought the plan would work and if not, the client and the NC would develop options to ensure that the plan would work in future.

If the focus of the plan was on physical changes to the system, the discussion would be held in the ute as they drove around the farm. If the focus was on financial aspects of the farm, limited discussions would be held in the ute, with a more in-depth discussion held at the house where financial documents would be available. Other studies (Gray, Kemp, Gardner, et al., 1999; Rogers, Kemp, et al., 1996) also report farm consultants providing support to farmer clients during implementation of on farm changes. The EC provided good support to his clients over the implementation phase with 1 – 2 monthly visits, but limited data was provided on this.

The NC's evaluation of on farm changes occurs at different stages of the consultancy process, depending on the complexity of the issue being addressed. He evaluates how the implementation of the plan is going in his initial follow-up phone call/e-mail, as described in section 4.8.8. For more complex issues the NC visits the client on are regular basis to help with the implementation of the plan. During these visits the plan is evaluated and changes are made as necessary, as described previously in this section. In other studies (Gray, Kemp, Gardner, et al., 1999; Rogers, McCosh, et al., 1996), the consultants visited the client several weeks after the report had been sent out, and during these visits they gathered information to assess the efficacy of the consultant's advice and also the ability of the client to implement the solution the consultant had recommended (Bruce, 2013; Gray et al., 2000; Gray, Kemp, & Gardner, 1999). This evaluation phase is important for the consultant's learning (Bruce, 2013).

Little was written about the EC's evaluation processes in the initial study in 2014 (Gray et al., 2014) . However, some insights were gained in a later study in 2017 (Gray et al., 2017). The EC stated that clients are often quick to tell him that his advice was incorrect. However he is careful when this happens and he will ask them what exactly the advice was that he had given them. If the client sets out what the advice was, but it does not sound correct, he will ask to see the report he sent the client after the visit to verify that this was his recommendation. He tends to know the nature of the advice he provides to his clients, so if it does not

sound like the sort of advice he would give, he investigates it further. Alternatively he may find that they have not implemented his advice correctly. So the consultant's evaluation of examples of where his advice fails is quite thorough and an important source of learning. He may either identify that: 1) the client has mis-understood his advice or 2) implemented it incorrectly or 3) he may find that his advice has not worked under some specific conditions that occurred with that client. As such, he also learns how "robust" his knowledge is and under which conditions it applies and under which conditions it is not valid (Gray, 2001).

The EC, like the NC uses the repeat visits for evaluation purposes (Gray et al., 2017). However, unlike the NC, he doesn't just evaluate the client's implementation of the changes, and the efficacy of the plan, he also evaluates a number of other factors. These include: 1) his assessment of the client and his situation and 2) the relevance of the service he is providing to the client. The consultant does a "stock take" or evaluation after 12 months to assess if his initial assessment of the client and his situation is correct. He will do this on the drive out to the farm and will reflect on what is really driving the client, what he wants, and if there is anything he is missing in relation to the client. He may then ask the client these questions when he gets to the farm. This is an example of meta-cognition and the role of reflection in learning (Hoffman, Feltovitch, & Ford, 1997; Hoffman et al., 2010). It is critical for ensuring the consultant has correctly assessed the client and his situation.

The EC also evaluates the relevance of the service he is providing to the client. In particular, he might ask a client "*What else can I do better for you?*" Whether or not he asks the client will depend upon how comfortable the EC thinks the relationship is. For some relationships he stated that "*you get a feeling that you know a relationship is going well, it's clicking, it's working, you think you are giving them something*". He will not ask this question of all clients, but he does ask it if he is wondering how his consultancy input is considered by the client and if he is providing the right advice in the right areas. The EC asks these questions when he believes that the relationship is at a point where the client will provide truthful answers to his questions.

4.10. Implications for training

The NC was on the cusp of moving from a novice to a competent consultant over the time that the interviews were conducted. He had built a client base to the point where he had been able to tailor his work to his preferred tasks. He is also on the point of having a full book of clients. In addition, many of his consultancy processes have become automatic, or intuitive. Thus his comments and insights are useful for the training of new farm consultants and those consultants just entering the novice stage of their career. Many of the insights on training and the novice stage of a consultant's career echo the suggestions of the EC and those from the literature.

The EC (Gray et al., 2014) suggested that people skills were so important that trainee consultants should not be hired without them. The NC also noted that people skills were important, however he demonstrated that consultants could be successful with a lower level of soft skills, but not to the level required to deal with sensitive family issues. It was more a case of having the attributes noted in Table 4.1, one of which was a desire to be sociable and talk to people.

The NC's suggested that a prospective farm consultant straight out of University should work in another employment position in agriculture for two to three years as this would allow them to develop an understanding of soft skills required in the workplace in preparation for consultancy training. However, while two to three years of experience in another job may benefit prospective farm management consultants, it is unlikely to be a popular option with their first employers. There could be the possibility for an apprenticeship scheme, whereby new graduates spend 3-6 months working for different agricultural companies, prior to moving into consultancy or similar roles. Alternatively extension organisations such as Beef & LambNZ and DairyNZ could take on a more formal role in the industry and act as the training ground for future farm management consultants.

Table 4.4: Suggested attributes of a trainee farm consultant

	Description
Attributes	An open mind, not set in their ways, non-arrogant Calm under pressure, don't get 'frazzled' Good inter-personal skills – want to talk to people, ask questions and be sociable Reasonably intuitive, i.e. reasonably perceptive of peoples personalities
Background	Seeing a range of farming systems and farmers in a range of situations Developing a technical skill to provide leverage in the initial stages of a consultancy career

The NC also emphasised the importance of new consultants experiencing a range of farming systems and working with farmers in a diverse range of situations, for example having had experience with a range of milk prices and climatic conditions (e.g. droughts, wet summers). He emphasised this not only in the background of a trainee consultant, but also in their training. Table 4.4 shows the specific areas that the NC suggested that a new consultant could be trained in, and how this training could be undertaken. The technical skills required to build confidence with farmers were describe in section 4.6, and are repeated in Table 4.5.

Table 4.5: Training for a new consultant

Areas of expertise	**Description**
Technical	• Working out farm programs including a calendar of events • Feed budgeting • Knowledge of feed curves in different regions • Feed requirements of stock fit with a particular feed curve • Develop relevant benchmarks for a farming system, for example what is an acceptable death rate, how much animal health costs are, the gross margin on a certain type of animal, how much feed an animal would consume • Compiling financial budgets • Compiling a gross margin, quickly. • To be able to use both manual methods i.e. pen and paper and complex models such as Farmax to address issues • Build a set of relevant, current, regional benchmarking data, both for farming systems and financial aspects of farming
Soft skills	• Observation, especially non-verbal ques • Questioning, including farming partners and staff. Semi structured interview techniques, goal driven and data driven information gathering techniques, probing and questioning techniques. • Validation techniques • Rapport building • Building positive social capital, within a firm, with agribusiness professionals and with farmers • Use of metal schema, classification etc. in problem diagnosis and solution development • Negotiation skills • Checking, prompting for issues not initially mentioned by the client
How training is undertaken	**Description**
Observation	Spending time observing a diverse range of farming systems, farmers and experienced consultants
Practice	In both technical areas, and in using soft skills in the consultancy process
Evaluation	Ability to see how farm changes have worked in practice and their outcome

Practice was described by Gray et al. (2014) as essential for the development of competence. It also actively engages the learner and should allow the trainee

consultant to practice reasoning skills in context. The NC noted that completing small pieces of work for senior consultants then graduating to project work, monitor farm groups and then discussion groups was how he obtained practice in farm consultancy. There are many ways of developing practical training exercises. The challenge is covering a wide range of farming systems, environments, season and industry challenges, such as pay-out and environmental constraints a point also emphasised by the EC (Gray et al., 2014). Using scenarios, for example with Farmax could be used to cover some of the situations, a point also made by the EC, but it would need to be developed as part of a package to incorporate the human or farmer element.

These suggestions would develop the skills and knowledge in farm management of a novice consultant, however there is a lag phase in this being recognised within the agricultural community. Novice consultants need to take *"baby steps"*, as the NC put it, to show that the outcomes of their suggestions are effective so that they can build a reputation and develop positive social capital within the industry.

As with the EC, the NC did not highlight the importance of developing meta-cognitive skills (Hoffman et al., 2010) in relation to training. Gray et al. (2014) emphasised that "*any programme for helping a trainee to build up their expertise needs to emphasise the development of metacognitive skills; this is a very effective way of promoting accelerated learning*" (Hoffman et al., 2010). Gray et al. (2014) advocated the use of learning diaries or a daily log where they answered questions such as:

- What was I trying to achieve?
- What knowledge would have helped me?
- How does this connect with my previous experience?
- Could I have managed the situation better? How?
- What do I need to do to learn from this experience?

Such questions allow novice consultants to develop reflection as a habit which is then used to identify mistakes they have made and how they can improve their skills and knowledge. Gray et al. (2014) also advocated the use of "wrappers" where a novice consultant might be asked to summarise the three most important points from the day. This activity is useful because it helps focus the novice on what are the important issues.

Following on from this study, it would be valuable to interview novice consultants at years one, two and three of their consultancy career to provide insights into the effectiveness of the training they are receiving to assess the suggestions provided by the NC and EC. In addition, selected novice consultants could be interviewed at critical stages of their training and early career stages to follow their development through this period.

4.11 Expert versus novice comparison

Both the consultants, who prefer to work with a client whom they find compatible, have developed a suitable script (Schank & Abelson, 1977) for handling the visit. They see a client as the owner of the problem and focus on determining the client's goals. Building rapport with a client assists with this process as well as with the collection of the required information. Both the consultants thought that it was very important to avoid jumping to conclusions and validate any data collected by using triangulation (observation, questioning and the analysis of records). Triangulation can also be used to classify clients, even comparing the accuracy of information provided by the farmer over time both within and across visits. During the problem solving process, the consultants both employ benchmarking, classification and comparative analysis to build a picture of the farming family, system and business. When trying to identify the cause of a problem they both use classification and mental schemas to 'drill down' to the heart of the issue. Once it was time to develop solutions, the two consultants involve the client in the selection of an appropriate option. They are prepared to help the client make changes gradually if necessary. The consultants conclude a visit by checking that all relevant issues have been dealt with and follow up subsequently to see what progress has been made. They both enjoy acting as a facilitator, having an on-going dialogue with clients about the problem, but are prepared, when the client requires it, to be more directive. Neither consultant will provide advice when they not competent in an area (Chi et al., 1988) and suggest that another specialist be brought in.

Some differences between the two consultants relate to the circumstances in which they work. The NC is employed by a firm with several other consultants and does not work solely with dairy farmers. He has been given projects to work on as well as building up social capital with other consultants, farmers and professionals who all refer clients to him. On the other hand, to secure clients, the EC has developed his own form of social capital, building up networks based on farmer groups. He has to wait for an invitation from one of these farmer before he can arrange an engagement visit to the farm, for which he makes no charge. With regards to professional development, the firm which employs the NC runs monthly meetings which cover technical and topical issues as well as holding an annual meeting to discuss progress in staff development. The expert working in a region by himself does not have these opportunities for personal growth. Consequently, he emphasizes the need to join professional associations to develop links with experts who can help him keep up to date.

Other differences between the ways in which the consultants deal with issues may be a result of their personal preferences or just reflect a difference between their respective client bases. The NC mentioned that he specifically assesses the farmer's potential as a client. This issue was not specifically discussed by the EC who does, like the NC, enjoy working with compatible clients and considers how

to add value to the client's business. The NC, though, has a preference for working with progressive clients who wish to change, finding them more open and better to work with. He expects his clients to provide access to their accounts when a financial problem arises. He noted himself that he does not have the necessary soft skills to deal with sensitive matters, but sees financial analysis as his strength. On the other hand, the EC sees social skills as the key to success. He only requests the accounts from a new client at the end of a first visit if he has determined that there is a financial problem. He believes that the provision of financial information is a delicate issue for most farmers.

The EC appears to have a more extensive script (Schank & Abelson, 1977) than the NC for managing the farm visit. Since he does not want to request access to accounts initially, he has to be able to use non-financial data to determine if there is a financial problem on the farm. He is very aware that he is only one of many sources of information available to clients and helps them to realise that they can be given misinformation. In this way he plays the part of an educator (Coutts et al., 2007) something not mentioned by the NC. The EC also sees clients more regularly than the NC which allows him to quickly evaluate the implementation of the plan and drip feed information about other potentially beneficial changes. After seeing the client for a year the consultant reflects on what is driving the client and whether his initial assessment of the situation was correct. This essentially allows him to exert control over what is occurring (Winne & Nesbit, 2010) and adapt his work practices as necessary (Klein, 2009).

The EC seems to have a richer mental schema (Endsley, 1997) for handling the problem solving process than the NC. For instance, when he diagnoses a client's knowledge gap he considers many different aspects of the situation. Similarly he employs a range of techniques when he assesses the management capabilities of clients or determines where value can be added to the business. In all these cases he uses a more sophisticated approach than the NC.

Both the consultants rely on intuition as well as their analytical skills to retain control of the problem solving process (Klein, 2009). They use in Evans (2008) terminology both System 1 and System 2 thinking supported by the use of heuristics. On balance, the NC seems more dependent on an intuitive approach to problem solving whilst the EC appears to consciously use heuristics more frequently as a short cut (Epstein, 2008). According to Gigerenzer and Gaissmaier (2011) this is a very successful strategy for experts who wish to minimize the amount of data they have to collect. Overall, the EC, seems to work more in a reflective mode (Evans, 2008; Flavell, 1979) than the NC. He appears to be fully aware of what he is doing during the consultancy engagement, indicating a greater level of experience and a higher degree of self-knowledge.

4.12 Conclusions

The aim of this research was to study how farm consultants assist farmers to improve their farming systems. In addition the research aimed to provide insights that may assist in the training of new farm consultants. This study focused on a NC with less than five years consultancy experience, whereas the companion study by Gray et al. (2014) worked with an EC who had spent almost three decades working as a farm consultant.

The NC highlighted two areas that were important for a new consultant to become proficient in in order to become a successful farm consultant. The first area was to develop an understanding of a wide range of farmers, farming systems in a range of environments, for example drought and high pay-outs. This could take place during two to three years' work post university and through training in the early phases of a consultants career. The second area in which a new consultant had to become proficient was in gathering and validating information and also looking for issues not mentioned by the farmer. This allows for accurate picture building which leads to correct problem diagnosis and solution development. The NC developed his proficiency in both areas by observation, practice, more practice and reviewing the outcomes of advice. The tasks or groups that he worked with changed over time as his knowledge and skills in consultancy developed. This research reconfirms the importance of new consultants becoming proficient in the two areas and also suggested method for new consultants developing these skills.

Both interpersonal and technical skills are important in a new consultant. This study and the companion study noted a high level of competence was required in both areas, however once this base level of competence had been reached, the consultant could be stronger in one area above the other and still be successful. The key was identifying the boundaries, strengths and weaknesses of each skill area and the consultant adapting their consultancy approach, for example the NC would bring in other consultants to work with farmers in appropriately highly sensitive issues such as succession.

Building rapport and positive social capital were important for gaining sensitive information from farmers and building a client base. An understanding of the theoretical aspects as well as observing experienced consultants in action combined with the opportunity to practice their skills may assist new consultants to build their experience in these areas.

The NC and the EC followed a similar consultancy process, such as developing a suitable script, building rapport validating data using triangulation, and both using classification and mental schema to drill down to identify issues of importance. Differences between the NC and EC arose as the NC worked as part of a consultancy group and thus had subtly different requirements in terms of the social capital he needed to build compared to the EC. The NC considered himself stronger at technical aspects of consultancy and would more strongly prefer

'progressive clients' while the EC emphasised the importance of interpersonal skills. These differences reflect their personal preferences which in turn shape the type of clients that they work with.

The EC appears to have a more extensive script for managing a farm visit, and also a richer mental schema. How much these differences are due to the individuals versus their experience could be assessed by further interviews with experienced and novice consultants.

While both the NC and EC provided valuable insights for both the farm consultancy process in New Zealand and the training of new consultants, it could be valuable to interview new consultants at an earlier stage in their career.

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